

**IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF GEORGIA
ATLANTA DIVISION**

**DONNA CURLING, ET AL.,
Plaintiffs,**

v.

**BRAD RAFFENSPERGER, ET AL.,
Defendants.**

Civil Action No. 1:17-CV-2989-AT

COALITION PLAINTIFFS' STATUS REPORT

In anticipation of the Status Conference scheduled for Tuesday, August 27, 2019, the Coalition Plaintiffs bring to the Court's attention the filing with the Secretary of State by the Coalition Plaintiffs, and over 2,300 other petitioners, of a request for reexamination of the Dominion system. In addition, the Coalition Plaintiffs note that they are in the process of conferring with the other parties as to two aspects of the Court's Order (Doc. 579), which discussions may result in a joint or unilateral request for clarification of the Order.

A. Request for Reexamination

On August 19, 2019, approximately 1,450 registered Georgia voters (including each of the Coalition Plaintiffs) filed a formal Request for Reexamination of the Dominion BMD Voting System with Georgia Secretary of

State Brad Raffensperger. (With supplements, now with 2,300 signatures, is attached hereto as Exhibit A). Pursuant to O.C.G.A. § 21-2-379.24, the Secretary must reexamine the Dominion BMD Voting System before it can be properly used in Georgia elections. Additionally, it is Coalition Plaintiffs' position that the system, once thoroughly examined, cannot meet the mandatory State Certification Rules as stated in the attached petition.

The reexamination has not begun and petitioners are awaiting a determination by the Secretary as to whether he will require the 2,300 petitioners to personally pay for the reexamination.

B. GEMS Use in 2020

The Court's August 15, 2019 Order directs the State Defendants to "refrain from the use of the GEMS/DRE system in conducting elections after 2019," (Doc. 579 at 148), and to develop a contingency plan using hand-marked paper ballots in coordination with scanners and other equipment available through the State's contract with Dominion. (*Id.*). The Court's Order also anticipates that the State Defendants will start this contingency planning with pilot elections in November 2019 using hand-marked paper ballots "along with optical ballot scanners and voter-verifiable, auditable ballot records."

The Coalition Plaintiffs' request for clarification with respect to this aspect of the Court's order arises out of the likelihood of numerous January, February and March elections prior to the planned statewide implementation of the Dominion system in late March 2020, and the significant risk that the Dominion system (ballot building, scanners, etc.) will not be ready to be deployed in time to be used with hand-marked paper ballots for a pilot in November 2019 or ahead of schedule to accommodate special elections arising in the first quarter 2020. The inability to use the Dominion system could arise 1) because these components of Dominion's systems have not been properly certified, or 2) because first quarter 2020 special elections will occur before implementation of the system, or 3) simply because of implementation delays in an already "tight" schedule.

There is no question that, after 2019, hand-marked paper ballots must be used instead of the old DRE machines. The question is whether, if the components of the Dominion system that would support hand-marked paper ballots (election management system, scanners, etc.) are not ready to be deployed, whether to support the use of hand-marked paper ballots, the State Defendants are authorized to use the GEMS system for ballot building and the AccuVote Scanners, which combination will permit auditable elections. The Coalition Plaintiffs believe such a solution to be the most practical low risk solution for secure first quarter 2020

elections, provided, however, that there be mandatory pre-certification audits of election results.

Coalition Plaintiffs are in the process of discussing this issue with the other parties, but wanted to bring this issue to the Court’s attention in connection with the Tuesday, August 27, 2019 status conference.

C. Electronic Pollbooks

The Court’s Order requires the State Defendants to develop a plan for implementation no later than January 3, 2020 addressing procedures to be undertaken to address errors and discrepancies in the “voter registration database that may cause eligible voters to (i) not appear as eligible voters in the electronic pollbooks....” and other errors. (Doc. 579 at 149). Though this may be implicit in the Court’s Order, the State Defendant’s plan should address not only errors in the voter registration database, but also data errors and software defects in the electronic pollbooks themselves. The “glitch” described by Richard Barron at the hearing, for example, was a defect in the electronic pollbook software and voter data, not the voter registration database. (*See* Plaintiffs Exhibit 16 at 4 (Fulton County’s Interrogatory Response explaining instances in which “‘Precinct Detail’ tab in the Express Poll displays an incorrect precinct”). Coalition Plaintiffs believe

that the plan described in paragraph 1 of the Court's Order, page 149, should address errors and discrepancies in the voter registration database and the electronic pollbooks and related software.

Coalition Plaintiffs are in the process of confirming with the State Defendants that this is their understanding as well and, based on that discussion, will be making an appropriate filing with the Court.

Respectfully submitted this 26th day of August, 2019.

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CERTIFICATE OF COMPLIANCE

Pursuant to LR 7.1(D), I hereby certify that the foregoing document has been prepared in accordance with the font type and margin requirements of LR 5.1, using font type of Times New Roman and a point size of 14.

/s/ Bruce P. Brown
Bruce P. Brown

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CERTIFICATE OF SERVICE

I hereby certify that on August 26, 2019, a copy of the foregoing was electronically filed with the Clerk of Court using the CM/ECF system, which will automatically send notification of such filing to all attorneys of record.

/s/ Bruce P. Brown
Bruce P. Brown

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August 19, 2019

The Honorable Brad Raffensperger
Georgia Secretary of State
214 State Capitol
Atlanta, GA 30334

Attn: Ryan Germany
rgermany@sos.ga.gov

Kevin Rayburn
krayburn@sos.ga.gov

Dear Secretary Raffensperger,

Pursuant to O.C.G.A. § 21-2-379.24, the undersigned electors of the State of Georgia, hereby request a reexamination of the Dominion Voting System (EAC Certification Number DVS-DemSuite5.5-A) (“Dominion System”), consisting of the Democracy Suite 5.5-A Election Management System Version 5.5.12.1, EMS Adjudication Version 5.5.8.1, ImageCast X Prime (ICX BMD) Ballot Marking Device Version 5.5.10.30, ImageCast Precinct (ICP) Scanning Device Version 5.5.3-0002, and ImageCast Central (ICC) Scanning Device Version 5.5.3-0002. We ask that the Dominion Electronic Pollbooks, part of the integrated voting system, be included in the reexamination, including rigorous tests of integrated functioning with the BMD units to assure accuracy in electronic ballot issuance. Electronic Pollbooks were excluded from your August 9, 2019 certification.

It appears that no Certification Agent was designated by your office for the performance of the required steps in the evaluation of a new voting system prior to the certification on August 9, 2019, as required by Georgia Election Code. In this requested reexamination, a qualified Certification Agent should be designated and caused to undertake the mandated evaluations and issue the report required by the Election Code to form the basis for your decision on certification.

We enclose well in excess of the required ten (10) signatures of duly registered Georgia electors who seek this reexamination. The undersigned voters hereby notify you that your certification of the Dominion System does not meet the requirements of Georgia Voting System Certification Rule 590-8-1-.01, and fails to comply with the Georgia Election Code. Therefore an immediate withdrawal of the August 9, 2019 certification is required and a legally compliant reexamination of the system is needed.

Pursuant to O.C.G.A. § 21-2-379.24(a), “The Secretary of State shall publish and maintain on his or her website the cost of such examination or reexamination.” However, no such information has been located on the Secretary’s website. Given that the issues of security and integrity of the new voting system is a matter of great public

interest, and that the initial certification appears to have not been conducted in accordance with Georgia Election Code, we ask that any fee for the reexamination be waived. The specific requests made by the undersigned electors require only *de minimis* expenditures for reexamaination and generally relate to required examination activities not undertaken in the orginal examination. Further, the original examination and certification was deficient. Voters should not be charged fees for the correction of deficiencies in the original examination. In the event that said fees are not waived, we ask that the signers of the petition be notified of the estimated fees expeditiously before undertaking the reexamination process. We do not authorize reexamination prior to an agreement on the amount of fees to be charged, although any such fees should be waived.

We have attached a **partial** list of deficiencies in the Dominion System which require attention during reexamination (Exhibit A). We respectfully request that the Secretary of State immediately reexamine the system, including designating a Certification Agent and causing the Certification Agent to issue a report relating to the system's security and compliance with the Georgia Election Code as required by 590-8-1-.01(d)7. We request that this reexamination be conducted immediately given the pending purchase of the system. The system should not be purchased, leased or used in pilot elections until the reexamination is satisfactorily completed in compliance with the Election Code.

Signatures of over 1,450 Georgia voters from 100 counties seeking this reexamination are attached. (Exhibit B). Your points of contact for this action will be Cam Ashling of Georgia Advancing Progress PAC and me on behalf of Coalition for Good Governance. Our contact information is included below.

Respectfully submitted,

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Organizing Georgia Voters

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Rhonda J. Martin
Atlanta, GA

Megan Missett
Atlanta, GA

Aileen Nakamura
Atlanta, GA

Petition Pages

**Over 1,450 signatures by duly registered electors
in the State of Georgia**

From the 100 counties of:

Baldwin	Floyd	Murray
Banks	Forsyth	Muscogee
Barrow	Franklin	Newton
Bartow	Fulton	Oconee
Ben Hill	Gilmer	Oglethorpe
Bibb	Glynn	Paulding
Bleckley	Gordon	Peach
Brantley	Grady	Pickens
Brooks	Greene	Pierce
Bryan	Gwinnett	Pike
Bulloch	Habersham	Polk
Butts	Hall	Putnam
Camden	Hampton	Rabun
Carroll	Hancock	Richmond
Catoosa	Haralson	Rockdale
Chatham	Harris	Spalding
Cherokee	Hart	Stephens
Clarke	Henry	Sumter
Clayton	Hillsborough	Tift
Cobb	Houston	Thomas
Columbia	Jackson	Toombs
Coweta	Jasper	Towns
Crawford	Laurens	Troup
Dade	Lee	Union
Dawson	Liberty	Upson
Dekalb	Lowndes	Walker
Dougherty	Lumpkin	Walton
Douglas	Macon-Bibb	Washington
Echols	Madison	White
Effingham	McDuffie	Whitfield
Elbert	McIntosh	Wilkes
Emanuel	Meriwether	Worth
Fannin	Monroe	
Fayette	Morgan	

Exhibit A

Dominion Voting System Deficiencies Requiring Reexamination

We seek reexamination of the Dominion Voting System given its numerous deficiencies and the deficiencies in the certification process including, but not limited to:

1. Deficient Certification Process and Testing Employed

Georgia Election Code Rule 590-8-1-.01, “Certification of Voting Systems,” specifies the rules and procedures by which voting systems may be certified in Georgia. However, the process by which the Dominion System was certified on August 9, 2019 failed to comply with these rules:

a. Certification Agent Was Not Designated and No Report Was Issued Prior to Certification

Georgia Election Code Rule 590-8-1-.01(d), “Procedures,” provides:

Qualification tests shall be performed to evaluate the degree to which a system complies with the requirements of the *Voting Systems Standards* issued by the Election Assistance Commission (EAC). Whenever possible, Qualification tests shall be conducted by Independent Test Agencies (ITA) certified by the EAC (Emphasis added)...

Certification tests shall be performed to certify that the voting system complies with the Georgia Election Code, the Rules of the Georgia State Election Board, and the Rules of the Secretary of State. A **Georgia Certification Agent** designated by the Secretary of State **shall conduct certification tests** (Emphasis added).

Rule 590-8-1-.01(d)4 requires:

The Georgia Certification Agent shall conduct a preliminary analysis of the Technical Data Package and prepare an **Evaluation Proposal** (Emphasis added).

Rule 590-8-1-.01(d)4(iii) states that Evaluation Proposal must contain a “Description of the activities required to **complete that portion of the evaluation which is to be performed by the Georgia Certification Agent.**”

Rule 590-8-1-.01(d)6 adds:

After any required ITA [Independent Test Agency] tests have been successfully completed, **the Georgia Certification Agent shall conduct the tests**

described in the Evaluation Proposal and submit a report of the findings to the Secretary of State (Emphasis added).

Finally, Rule 590-8-1-.01(d) states:

Based on the information contained in the ***report from the Georgia Certification Agent***, and any other information in her possession, the Secretary of State shall determine whether the proposed voting system shall be certified for use in the State of Georgia and so notify the vendor (Emphasis added).

It appears that the operational functional testing performed by testing lab Pro V&V of Alabama was a “Qualification” test, but was not reviewed by a Certification Agent who ***then should have completed the certification testing*** in order to submit a Certification Agent’s report for purposes of creating a basis for your decision to certify. It appears that Secretary Raffensperger did not designate a Certification Agent as required to conduct a “preliminary analysis of the Technical Data Package and prepare an Evaluation Proposal”, and “conduct the tests described in the Evaluation Proposal and submit a report of the findings to the Secretary of State.” An Open Records Request for certification documentation for the Dominion System only produced the *Dominion System Pro V+V Georgia Certification Testing Report* and the August 9, 2019 Dominion System Certification. No Certification Agent Report or reference to designated Certification Agent was located. Such a report is legally required as the basis for system certification.

The Certification of the Dominion System by Secretary Raffensperger appears to fail to comply with the requirement to designate a Certification Agent to conduct the certification test and rely on that Agent’s report for the certification decision.

b. Incorrect Technical Testing Standards Used for Certification

According to the *Dominion System Pro V+V Georgia Certification Testing Report*, the Dominion System was tested under the Election Assistance Commission (“EAC”)’s Voluntary Voting Systems Guidelines 1.0 2005 standards (“VVSG 1.0”). This violates Rule 590-8-1-.01(d) of the Georgia Election Code requiring testing to and compliance with “*Voting System Standards*,” which is the EAC 2002 standard. These standards are not the same and can be incompatible on some technical issues.

The Rule requiring 2002 standards certification cannot simply be re-interpreted to refer to VVSG 1.0. Indeed, if the Rule was interpreted to require the most recent EAC standard, this would require the EAC 2015 standards VVSG 1.1, to which ***no available voting system has been certified***. This discrepancy must be reconciled. Either Secretary of State rule-making processes should update the standard required or a different system must be selected.

c. Failure to Certify Electronic Pollbooks

The August 9, 2019 Dominion System Certification makes no reference to electronic pollbook certification. Chris Harvey, the State Elections Director, has testified that Georgia includes the electronic pollbooks as a component of the state's voting system. Indeed, it is an integrated component of the voting system that determines the accuracy of the electronic ballot a voter is issued. As such, the pollbooks selected for purchase should be certified under the Georgia certification standards of the Georgia Election Code prior to its purchase and use.

d. Certification Failed to Include Testing for Safety (Security)

O.C.G.A. § 21-2-379.24(d) provides:

The Secretary of State shall thereupon examine or reexamine such device and shall make and file in his or her office a report, attested by his or her signature and the seal of his or her office, stating whether, in his or her opinion, the kind of device so examined can be **safely and accurately** used by electors at primaries and elections as provided in this chapter (Emphasis added).

It appears the Qualification testing of the Dominion System was one in which “all system functions, which are essential to the conduct of an election in the State of Georgia, were evaluated.”¹ While the functionality of the components of the Dominion System may have been tested, it is a glaring omission that the **safety of the system**, particularly in regards to cybersecurity and the integrity of votes cast has yet to be tested by Georgia.

According to virtually every qualified expert in the field, **BMDs are vulnerable to undetected error or attack**², and it is unclear whether Georgia’s voting systems are held to any set security standards. Other states are active in their fight against hackers and malware – Pennsylvania, for instance, has adopted a 30-page “PA Voting System Security Standard”³ by which to evaluate voting systems.

The reexamination considering the safety (security) of the system should address the Dominion System’s known vulnerabilities such as those announced by the cybersecurity expert organizers of the Voting Village at DEFCON recently:⁴

-The Dominion Imagecast Precinct runs an application which already has 20 documented medium to high level vulnerabilities-- including the ability to allow remote attackers to implement a DNS attack.

¹ Dominion System Pro V+V Georgia Certification Testing Report, p.3-4:

https://sos.ga.gov/admin/uploads/Dominion_Test_Report.pdf

² Appel, DeMillo, Stark paper: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3375755

NAS report: <https://www.nap.edu/catalog/25120/securing-the-vote-protecting-american-democracy>

Michael Shamos' testimony: <https://www.youtube.com/watch?v=iSkMmqwsHKE>

³<https://www.dos.pa.gov/VotingElections/Documents/Voting%20Systems/Directives/Conduct%20Directive%20Att%20E%20-%20PA%20Voting%20System%20Security%20Standard%20v06122018.pdf>

⁴ <https://twitter.com/VotingVillageDC/status/1160663776884154369?s=20>

-The Dominion Imagecast Precinct has an exposed flash card containing an .xml file that if manipulated would allow for scanned votes to be redirected to a different candidate.

2. Barcode Votes are Unverifiable by the Voter

The ImageCast X BMD converts the voter's selections on the screen to a barcode which is printed on the printed vote record and then fed into the scanner by the voter. Although the printed vote record also includes human-readable information that is supposed to show the votes cast by the voter, it is the barcode (not readable by the voter) that is read and counted by the scanner and is the basis for the ultimate tabulation of the votes.

It should go without saying that requiring a voter to cast votes recorded in the form of a barcode that she cannot read, interpret or verify directly undermines the State's decision to adopt a voting system that includes a verifiable ballot. The Dominion System violates these specific provisions of the Georgia Election Code:

O.C.G.A. §21-2-2(7.1):

'Electronic ballot marker' means an electronic device that does not compute or retain votes; may integrate components such as a ballot scanner, printer, touch screen monitor, audio output, and a navigational keypad; and uses electronic technology to independently and privately mark a paper ballot at the direction of an elector, interpret ballot selections, communicate such interpretation for elector verification, and print ***an elector verifiable paper ballot*** (emphasis added).

a. Tabulated Vote Records Are Not “elector verifiable” or “readable by the elector”

The barcoded symbols printed on the “paper ballot” and counted by the scanner are not, of course, “elector verifiable,” violating the Georgia Election Code. Though the system also prints what is designed to be a human readable recapitulation of the voter's selections, that information does not constitute the “ballot” or “vote” that can be counted by the Dominion System; it is the **barcode** that the scanners are programmed to read to create the vote tallies. The voter, however, has no way of knowing what vote selections are embedded in the encrypted barcode. The barcode may be coded incorrectly or coded correctly on the touchscreen and then miscoded (by programming error, bug, malicious attack, etc.) either on the barcode or at the scanner where the ballot is cast.

b. Dominion System Barcodes Cannot Generate Official Vote Counts

The use of barcodes for tallying runs afoul of O.C.G.A. § 21-2-300(a)(2) read in conjunction with O.C.G.A. § 21-2-379.22(6) and O.C.G.A. §21-2-379.23(d). O.C.G.A. § 21-2-300(a)(2) states that the “electronic ballot markers shall produce paper ballots which are marked with the elector's choices in a format readable by the elector.” O.C.G.A. § 21-2-379.22(6) also states that the “electronic ballot markers shall produce paper ballots which are marked with the elector's choices in a format readable by the electors.” O.C.G.A. §21-2-379.23(d) states that “The paper ballot printed by the electronic

ballot marker shall constitute the official ballot **and** shall be used for, and govern the result in, any recount conducted pursuant to Section 21-2-495 and any audit conducted pursuant to Section 21-2-498" (emphasis added). A fatal problem with the Dominion System is that the portion of the ballot that is "readable by the elector" is **not** the portion that is machine-tabulated, and by law the barcode is not to govern **any** result at any stage of ballot processing, which means that the barcode cannot legally be used to tally the vote counts. As a result, the Dominion System cannot comply with Georgia's Election Code.

The Dominion System tabulates barcodes, not human readable votes. But the ballot marking device statutes adopted as part of HB316 requires that official tallies be produced by elector-readable ballots and that recounts and audits also be based on ballots readable by the elector. The Dominion System simply does not tabulate votes in the manner required by the Georgia Election Code. If the Dominion System is implemented, in order to comply with the Election Code, ***manual counts of the voters' human-readable selections on the paper record would be required to obtain the vote tallies.*** This is an absurd result that must be considered in the reexamination and selection of a voting system.

3. Results Produced by the Dominion System are Not Auditable

Georgia's Election Code now requires that election results be audited. However, the Dominion System does not produce auditable election results. Such non-compliance with the Election Code should have prohibited the August 9, 2019 Dominion System certification.

Auditing and voting system experts are in broad agreement that electors are frequently unable to adequately verify that the machine has printed their intended ballot content, resulting in the fact that there is no auditable source record.⁵ Computer science and election security experts Professors Andrew Appel, Rich DeMillo and Philip Stark have warned that even if voters notice votes are recorded incorrectly on the ballot summary card, there is no reliable feedback loop to provide sufficient evidence to address BMDs that may be recording votes incorrectly. In other words, it is likely that faulty machines will continue to be used in a polling place without errors being addressed.

Professor Stark, the nation's premier expert in post-election auditing, has warned repeatedly that auditing election results generate using primarily BMDs is "meaningless."⁶ His opinion, with the concurrence of the majority of other experts in the field simply cannot be ignored in favor of wishful thinking.

4. Violation of Secret Ballot Requirements

⁵ Ballot-Marking Devices (BMDs) Cannot Assure the Will of the Voters:

https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3375755

⁶ <https://coalitionforgoodgovernance.sharefile.com/d-s542437f60e5465f9>

The Dominion System Scanners Record Data that Violates Georgia's Secret Ballot Protections

According to Dominion's responses to the State of Michigan's certification process ⁷, the scanners used by the Dominion System appear to violate Georgia's secret ballot laws and the Georgia Election Code. The Dominion Precinct Scanner records the ballots in chronological order of scanning with timestamps which are retained on memory cards in encrypted records. Although the timestamp information may not be exported during routine report writing, it appears that election insiders or hackers with access to decrypted data on the cards could replay the scanned ballots in order to connect a voter with his or her ballot.

The order of voters casting their ballots in the polling place can easily be determined by poll workers, poll watchers, security video surveillance, other voters, the public observing the election, public electronic pollbook records, and commercial data collectors. The order or time merely needs to be matched with the timestamp on the encrypted memory card to connect the voter and her ballot. This is a significant defect, and a clear violation of Georgia's requirement of absolute secrecy in voting.

The Georgia Constitution states: "Elections by the people shall be by secret ballot." (Ga. Const. Art. II, § 1, ¶ I). O.C. G.A. § 21-2-70(13) provides that election superintendents guarantee the secrecy of the ballot. O.C. G.A. 21-2-379.22 (5) requires that ballot marking devices "Permit voting in absolute secrecy so that no person can see or know any other elector's votes." See also O.C.G.A. § 21-2-365(6) (scanning systems "shall permit voting in absolute secrecy"). Georgia's strong legal protections of the secret ballot will not permit the operation of the Dominion scanner.

5. Accessibility

The scanners used by ImageCast X BMD may violate the Help America Vote Act of 2002 (HAVA), § 301(a), which requires that a voting system shall:

- 1.A.i: "permit the voter to verify (in a private and independent manner) the votes selected by the voter on the ballot before the ballot is cast and counted."
- 1.A.ii: "provide the voter with the opportunity (in a private and independent manner) to change the ballot or correct any error before the ballot is cast and counted (including the opportunity to correct the error through the issuance of a replacement ballot if the voter was otherwise unable to change the ballot or correct any error)."

⁷https://www.michigan.gov/documents/sos/071B7700117_Dominion_Exhibit_2_to_Sch_A_Tech_Req_555357_7.pdf (item 28)

3.A: “be accessible for individuals with disabilities, including nonvisual accessibility for the blind and visually impaired, in a manner that provides the same opportunity for access and participation (including privacy and independence) as for other voters.”

The Master Technical Evaluation report of the Dominion System shows that the system was harshly reviewed by its six Georgia evaluators on accessibility evaluations. That report makes it clear that the Dominion System is **not accessible** for individuals with disabilities “in a manner that provides the same opportunity for access and participation (including privacy and independence) as for other voters.”

Because the Dominion System was only reviewed by evaluators who watched a video provided by Dominion, and was not reviewed by an accessibility test group, we suggest that more sophisticated accessibility evaluations be conducted in person by experts to determine compliance with HAVA and whether the system “permit(s) the voter to verify (in a private and independent manner) the votes selected by the voter on the ballot before the ballot is cast and counted.”

6. Certification Denied by the State of Texas

During the reexamination of the Dominion Voting System, we ask that the evaluation consider the reports on this system by the State of Texas professional examiners who unanimously rejected the Dominion System in January 2019. The findings are listed in reports at https://www.sos.texas.gov/elections/laws/jan2019_dominion.shtml. The testing failures included the complexity of configuration and ballot adjudication services crashing, as well as poor scanner image quality, frequent errors and paper jamming problems.

7. Summary

For the above reasons, the Georgia voters listed on Exhibit B and the organizations supporting this petition respectfully request your immediate and thorough reexamination of the Dominion System, including the electronic pollbooks. We request that in compliance with Rule 590-8-1-.01(d), you designate a Certification Agent to undertake the duties required by the Rule, including issuing a report on which your decision on system certification should be based. The Dominion System fails to meet Georgia’s voting system certification requirements. We urge you to promptly withdraw its certification and reexamine the system.

August 20, 2019

The Honorable Brad Raffensperger
Georgia Secretary of State
214 State Capitol
Atlanta, GA 30334

Attn: Ryan Germany
rgermany@sos.ga.gov

Kevin Rayburn
krayburn@sos.ga.gov

Re: Reexamination Petition Supplemental information

Dear Secretary Raffensperger,

Please accept this as a supplement to yesterday's **Petition to Reexamine the New Dominion Voting System**, and please note the attached article written by Brit Williams and Merle S. King titled, "Implementing Voting Systems: The Georgia Method." Mr. Williams and Mr. King were both members of the Center for Election Systems at Kennesaw State University executive leadership and oversaw the implementation and administration of the current DRE voting system.

The highlighted sections of the article explain the process of complying with the Election Assistance Commission (EAC) Voting System Standards, and the difference between Qualification Testing and Certification Testing as the first and second steps in "maintain(ing) the accuracy and continuously improve(ing) the security of the voting system."

The article clearly details that the functional testing conducted at the Alabama Pro V&V Independent Testing Agency (ITA) should be considered the "first step" of Qualification Testing, "to establish the functionality, accuracy, security, reliability, and maintainability of the system."

It further states that, "The second step in the EAC Standards program is state-level certification testing." Specifically, "conduct(ing) Certification Tests to ensure the system **complies** with the State Election Code, The Rules of the State Board of Elections, and The Rules of the Secretary of State. During these tests the system is examined for **usability and affordability**. In addition, tests designed by the KSU Center for Information Security, Education, and Awareness are conducted to **detect extraneous or fraudulent code**."

As mentioned in the Petition submitted yesterday, it appears that your office did not appoint a Georgia Certification Agent to conduct any such legal compliance, usability, affordability, or security testing as required by the Voting System Certification Rule.

While the Secretary of State's website shows that a Georgia Technical Evaluation was performed, this evaluation was conducted **prior** to the Qualification Test by the ITA. Furthermore, it appears that the six evaluators of the Technical Evaluation did not have access to the Dominion Voting System – rather, they based their evaluations solely on what could be observed from video provided by Dominion, which may be likened to evaluating a car for “Car of the Year” by watching demo videos but not taking the car for a test drive.

We submit this article in order to better demonstrate the specific ways in which we believe Georgia Election Code Rule 590-8-1-.01(d), “Procedures,” was not completed. It is also imperative to note that, prior to certifying the present DRE voting system, it “was subjected to **six weeks of testing** that included **processing over 250,000 ballots in both primary and general election formats. If the system fails State Certification Testing** for any reason, **the fault is corrected by the vendor and the revised system is returned to the ITA for Qualification Testing.**” This indicates that Certification Testing, done properly, is likely to take several weeks to complete.

Please also note the addition of FreedomWorks as one of the Co-Sponsors of our Petition. As of noon today, over 1,740 Georgia voters have signed our Petition from 103 Georgia counties, and many more are still signing. We will be submitting a supplemental Petitioners’ Signature List on Friday.

Respectfully submitted,

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By BRIT J. WILLIAMS AND MERLE S. KING

IMPLEMENTING VOTING SYSTEMS: THE GEORGIA METHOD

*Sharing the experiences of the first statewide adoption of
a computerized election process.*

THE HISTORY OF ELECTIONS AND COMPUTERS in Georgia is unique. DeKalb and Fulton counties in the metro-Atlanta area were the first jurisdictions in the U.S. to use computers to tally votes in a primary election in October 1964 [2]. Georgia was the first state to adopt a uniform, statewide direct-recording electronic (DRE) technology in 2002. (DRE systems are sometimes referred to as “computerized voting systems,” or “touch-screen voting systems”.) Georgians have been comfortable and confident in the use of technology to manage the state’s election processes [1]. Georgia has a model system for the deployment and management of elections technology, which combines the resources of its Secretary of State (SOS), its University system, and its county election officials. This interlocking, multilevel approach helps ensure the accuracy and integrity of Georgia elections.

In the general election of 2000 the voters in Georgia voted on a variety of election devices. Two of the smallest counties used hand-counted paper ballots; 73 counties voted on mechanical lever

machines; 17 counties voted on punch-card voting systems; and 67 counties voted on optical-scan voting systems. In 2000 there were no DRE voting systems in use in Georgia.

Due to the requirements of a secret ballot it is impossible to conduct an accurate study of voting patterns. However, the number of undervotes at the top of the ballot, in this case the presidential contest, is generally viewed as an indication of the performance of the voting system. Undervoted ballots are those ballots for which no vote was recorded for a particular office. In Georgia in November of 2000, over 93,991 voters (3.5%) failed to register a vote for president. These undervotes were spread evenly across all of the various types of voting systems. In the November 2002 election, using DRE technology, the undervote

dropped to 0.86% [6].

Governor Roy Barnes and Secretary of State Cathy Cox considered the undervote in November 2000 unacceptable and initiated a study to determine ways to improve the state’s voting systems. The 21st Century Voting Commission was formed



to investigate the relative merits of available voting systems and make a recommendation to the SOS. After extensive study and evaluation the committee recommended that Georgia adopt a statewide DRE voting system. Toward this goal, the 2001 Georgia State Legislature allocated funds for the purchase of a DRE voting system.

A Voting System Procurement Committee was formed, and bids were issued for a statewide implementation of a DRE voting system. In order to be considered for this procurement, a voting system had to have been issued a National Association of State Election Directors (NASED) Qualification Number and successfully pass a State Certification Evaluation [4]. Seven vendors qualified a system to bid. Bids were evaluated and an order was placed in May 2002 with the intent of using the system in the general election in November 2002.

The Center for Election Systems

Once the decision was made to convert the state to a DRE voting system, several challenges were identified. Georgia would be required to convert over 3,000 precincts from a collection of disparate lever-machine, optical-scan, and punch-card technologies to a single, uniform DRE technology. Approximately 3,000 poll managers, and 10,000 poll workers needed to be trained. The warehouse operations of the vendor had to be audited. DRE voting stations, election management servers, optical ballot scanners (for absentee ballots) and ancillaries had to be manufactured, configured, and delivered. Once delivered to the counties the hardware and software had to be tested, ballots built, and logic and accuracy tests performed on each precinct configuration.

Georgia has the largest land area of any state east of the Mississippi river, and with 159 counties—each functioning as a separate administrative unit—its infrastructure and transportation systems created additional deployment challenges. From the start of procurement until the November 2002 election, the state of Georgia had five months to orchestrate the largest deployment of voting technology in its history.

Faculty at Kennesaw State University (KSU) had conducted certification tests of computer-based voting systems for the state since 1988. Based on this expertise, the university proposed the formation of a center to support the installation and end-user training for the new voting system. The SOS authorized KSU to create a Center for Election Systems dedicated to assisting with the deployment of the DRE voting technology and providing ongoing support.

In April 2002, the KSU Center for Election Systems was created and charged with the responsibility

of ensuring the integrity of voting systems in Georgia through training, research, auditing, and testing of voting systems. The Center maintains an arms-length working relationship with the SOS and the vendor, ensuring both independence and objectivity in its work. The Center has continued to evolve, adapting to the emerging issues associated with elections in general and DRE technology in particular.

The Center works closely with the Elections Division of the SOS, the Georgia county election superintendents, and the vendor to facilitate successful elections. The Center's staff includes a Director responsible for the day-to-day operations of the Center; a Technology Coordinator responsible for overseeing testing protocols and implementation; a Training Coordinator responsible for developing and implementing training programs for county election officials; and an Elections Coordinator responsible for assisting counties and municipalities in the construction of ballots. The Center employs graduate and undergraduate students who work in its call center and provide some of the personnel for its testing activities. All employees of the Center must complete a preemployment background check and an orientation program that includes election law and ethics.

The 2002 Election

Deployment of the DRE technology in the summer of 2002 was characterized by the conviction of the SOS that Georgia should eliminate technological barriers to voting, such as undervotes or spoiled ballots. Unlike most IT rollouts in which the project managers can compromise functionality, scope or schedule as a means of meeting project goals, this system had to be fully deployed, fully functional, and ready to use, a minimum of 30 days prior to the November election. With enormous logistical issues and little margin for error, the project began in earnest on May 1, 2002.

One of the first activities of the KSU Center for Election Systems was to develop an audit program to monitor the vendor's warehousing and shipping procedures. This audit included a report of the condition of the warehouse, correctness and completeness of bills of lading and shipping records, and spot checks on the quality of units leaving the assembly and integration production lines at the warehouse. Reports were provided to the SOS's Election Division as well as the vendor's management to assist them in fine-tuning their own quality control processes.

Once the DRE units, servers, optical scanner, memory cards, and encoders were delivered to a county, the Center's staff performed an Acceptance Test on the equipment. Georgia Election Code

requires that all equipment used in elections must pass a rigorous unit test before use in the state. This required the Center to test 23,000 DRE units (several large counties placed their own orders for additional units, beyond the 19,000 purchased by the state), 8,000 encoders, 400 optical scanners, 161 servers, and other peripheral devices. The acceptance testing process also enabled the Center's staff to inspect the storage facilities of the equipment and to make subsequent recommendations for improvement at the county level. In the course of the three month acceptance testing process, the Center failed over 1,000 pieces of equipment for a variety of reasons, including screen freezes, incorrect time and date settings, incorrect software versions, incorrect serial numbers, defective cases, bad batteries, and various hardware failures. Failed units were removed from the county and replaced, with subsequent testing of the replacement units. County election superintendents were provided detailed reports of the status of their election equipment inventories, including a failed-unit report.

Acceptance testing was completed in mid-September of 2002. The Center then shifted its focus to the training of poll managers and poll workers for the upcoming election. On Election Day the Center's staff was deployed to the counties to provide assistance at the precinct level throughout the state.

Ensuring the Integrity of Elections in Georgia

The security of election technologies and the integrity of the election process is a shared responsibility. The Georgia Constitution invests the SOS with the stewardship of elections, but the integrity of elections depends upon the joint efforts of the SOS Elections Division, county election superintendents, the Center for Election Systems, vendors, poll managers, poll workers, and ultimately the voting citizens themselves.

Training. The training issues in election technologies are unique. The process is heavily dependent upon personnel that are both volunteer and infrequent users of the systems. The processes are a combination of manual and computerized operations that are the result of state and federal election law, state election rules, election tradition, and functional requirements of the election technologies. The processes are dynamic and change in varying degrees from election to election, requiring a constant vigilance of training objectives, materials, and curriculum. The KSU Center is responsible for working with the vendor and state and county officials in the development and maintenance of training programs.

In 2003, the State of Georgia enacted legislation that requires all election superintendents to successfully complete 64 hours of training. This training includes election law, ethics, and election procedures, including those unique to the current DRE technology used in Georgia. This training helps ensure that appropriate security procedures are understood and implemented at the county and precinct level [5].

Technology Support. The KSU Center provides technology support to counties and the SOS Elections Division. This support includes the evaluation of new technologies, troubleshooting, and call center support for end users. The Center evaluates existing and proposed technology innovations to the existing configuration and provides feedback to the SOS Election Division and the DRE vendor. At the forefront of the Center's evaluation of every proposed technology change is the need for: compliance with EAC voting systems standards; compliance with Georgia election code; robustness of the system to emerging threats; and concern for the public's perception of the integrity of the election process.

Election Support. On Election Day, the Center becomes a comprehensive call center for election issues. Incoming calls and faxes are assessed and directed to the vendor's support staff, the SOS Elections Division and the Center's staff for resolution. Call logs are analyzed and used as a basis for improved communication, training, documentation, and technology upgrades.

Ballot Building. One benefit of using a uniform technology throughout the state is that many ballot-building procedures can be centralized. This enables better error detection and correction as well as efficiency in the production of redundant ballot content (federal and statewide races). Ballots can be reviewed for compliance with state law as well as proper district and precinct information. Ballot images are created at the KSU Center with multiple levels of review. Then the ballots are delivered to the counties for final review and acceptance.

Assurance. A primary function of the KSU Center for Election Systems is to maintain the accuracy and continuously improve the security of the voting system. This is a dynamic activity that continuously evaluates the voting system and implements policies, procedures, and system modifications to improve the system. The components of this process are directed toward assuring the system is correctly installed (Qualification Testing, Certification Testing, and Acceptance Testing), assuring the system is functioning properly (Logic and Accuracy Testing), and assuring the system has not been compromised (Integrity Testing).

Qualification Testing: ITA. Georgia was one of the first states to adopt the Election Assistance Commission (EAC) Voting System Standard in its entirety (formerly these standards were referred to as Federal Elections Commission (FEC) standards) [3]. The first step in this process is Qualification by a NASED Independent Testing Agency (ITA). Before any voting system can be considered for use in an election in the state it must successfully pass ITA testing for compliance with the AEC Voting System Standards and be issued a NASED Qualification Number. This testing is designed to establish the functionality, accuracy, security, reliability, and maintainability of the system.

Certification Testing: Center for Election Systems. The second step in the EAC Standards program is state-level certification testing. The KSU Center for Election Systems conducts Certification Tests to ensure the system complies with the State Election Code, The Rules of the State Board of Elections, and The Rules of the Secretary of State. During these tests the system is examined for usability and affordability. In addition, tests designed by the KSU Center for Information Security, Education, and Awareness are conducted to detect extraneous or fraudulent code. To maintain the audit integrity of the system, the KSU Center receives the software directly from the ITA, thus ensuring that the software tested is identical to the software qualified by the ITA.

The present state voting system was subjected to six weeks of testing that included processing over 250,000 ballots in both primary and general election formats. If the system fails State Certification Testing for any reason, the fault is corrected by the vendor and the revised system is returned to the ITA for Qualification Testing. When the system successfully completes State Certification Testing, the KSU Center archives the tested software and this archived software is used as the basis for subsequent signature analysis to validate the software used in the counties.

Acceptance Testing: Center for Election Systems. The final step in the EAC Standards program is Acceptance Testing. After the system is delivered to a county, a team from the KSU Center goes to the county and conduct tests to ensure that the system, as delivered, is identical to the system that passed Qualification Testing and Certification Testing. In addition to tests to verify the correctness of the software, these tests verify that the hardware components are working properly.

Logic and Accuracy Testing: County Election Officials. Prior to each election, county election officials conduct Logic and Accuracy Tests to ensure the

election has been properly programmed, the ballots are correct, and the system is accurately tabulating the votes. These tests are open to the public and must be advertised in the county's official publication.

Integrity Testing: Center for Election Systems.

Integrity Testing is conducted at periodic and at random times to ensure the voting system in use has not been altered. The last step in the Certification Tests described here is to compute an electronic signature of the tested system to be used to compare with the signature of systems in the counties. This signature is based on FIPS 180-2 and is estimated to detect any modification to the system with a probability of 1/10,000,000,000 [4]. This comparison can be conducted immediately before and after an election to verify that the system was correct prior to the election and did not change during the election. It can also be used after any random event (for example, a nearby lightning strike or power failure) to verify that the system was not altered.

Conclusion

The most cited measurement of election system integrity is the undervote. It is generally accepted in the elections community that high undervote rates indicate problems with the voting system. Georgia has progressed from an undervote rate of 4.4% across a variety of election technologies in the November 2000 election to an undervote rate of less than 1% using DRE technology in the November 2002 election. This increase in the integrity of the elections system is attributed to the comprehensive deployment and management program put into place by the Secretary of State and implemented by the SOS Elections Division, the KSU Center for Election Systems, and the county election officials in the state of Georgia. **c**

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August 26, 2019

The Honorable Brad Raffensperger
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Kevin Rayburn
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Re: Reexamination Petition Second Supplement

Dear Secretary Raffensperger,

Please accept this second supplement to the August 19, 2019 **Petition to Reexamine the New Dominion Voting System**. This supplement adds signatures to now total over 2,300 registered Georgia voters from 115 counties seeking the reexamination.

You will note that numerous public officials, candidates and former candidates have signed this petition out of concern over the integrity of the Dominion BMD Voting System and its failure to comply with Georgia law. (Exhibit A) We urge you to take our concerns about the system seriously as you initiate the reexamination process.

We were dismayed to hear your remarks at the State Election Board meeting that our request is a “waste of resources,” because the system has just been certified. Our point is that your examination was materially deficient and not in substantial compliance with the Georgia Election Code, as we described in the petition. We ask that you undertake a thorough reexamination and complete the required steps that were circumvented.

Based on your remarks to the press and the State Election Board, it appears that you have prejudged the outcome of the requested reexamination as you have repeatedly stated that the reexamination will in no way impact the implementation schedule of the new system. Obviously, you cannot know the outcome of testing that has not been undertaken unless you have determined in advance that favorable grades will be given during system testing. This is unacceptable and in violation of Georgia law. The Voting System Certification Rules involve mandatory scientific, objective, and independent rigorous testing---not merely the rubber stamp that you seem to intend, based on your announcements to date.

You received our petition one week ago. We have not heard from your office concerning plans for the reexamination efforts. Please let us hear from you on this urgent matter, given the tight timetable for system implementation.

Please find attached supplemental listing of petition signers.

Respectfully submitted,



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